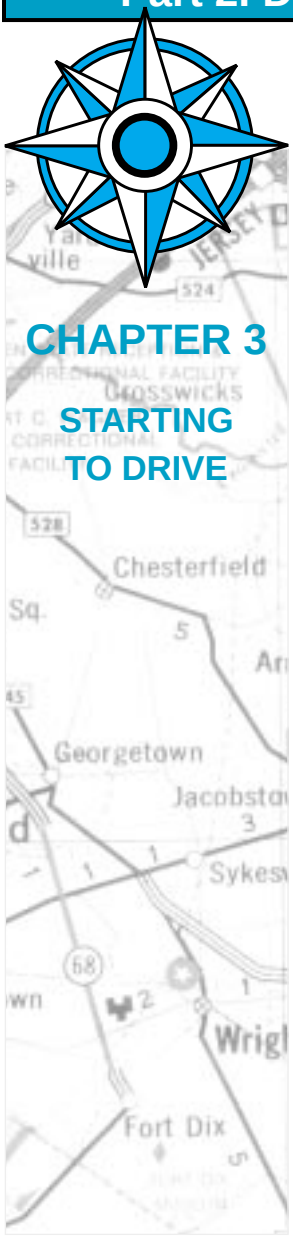


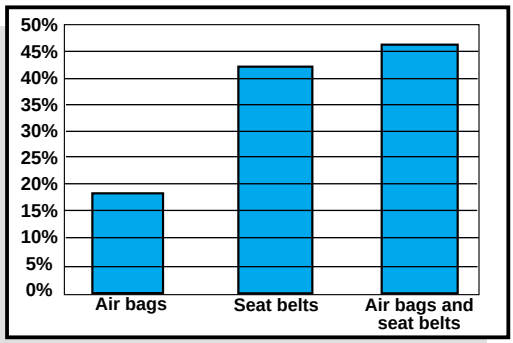
CHAPTER 3
STARTING TO DRIVE

This chapter covers step-by-step hands-on driving basics that begin when you get in the vehicle and two laws: the seat belt law and the child restraint law.

Providing an appropriate level of protection for vehicle occupants during and after a collision is called **passive safety.** Safe automobiles must have bodies that absorb as much collision energy as possible with reinforced cabins that provide additional resistance. They must have restraint systems and appropriate interior padding for additional protection of the occupants.

Examples of passive safety items are seat belts, air bags and child car seats. Seat belts and air bags should be used together. Safety engineering research shows that using air bags and seat belts together reduces fatalities (see chart below). Before you turn the ignition key, put on your safety belt and make sure passengers are secured by safety belts. The New Jersey law and the guides to proper car seat, seat belt and air bag use are explained in this chapter.

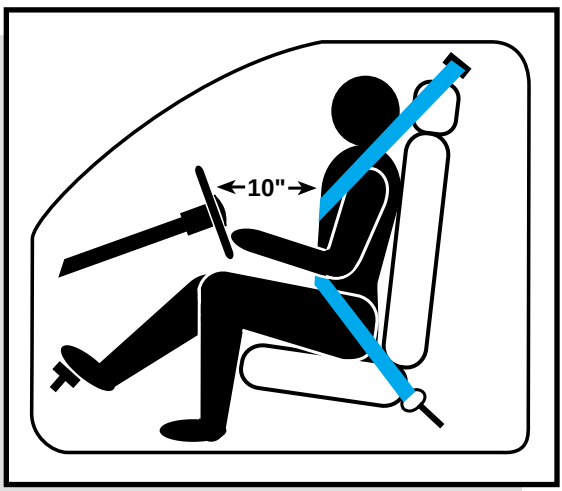
Fatality reduction trends for passive safety restraints



Seat belt law

The New Jersey **seat belt law** requires all front-seat occupants of passenger vehicles operated in New Jersey to wear a seat belt system. The driver is responsible for passengers under 18 years. Front-seat passengers 18 years and over are responsible for themselves. Drivers with GDL permits or provisional licenses must use seat belts. Additionally, they must require all passengers seated anywhere in the vehicle to use seat belts.

Effective May 1, 2000 enforcement of New Jersey's seat belt law that requires the driver, front seat passenger and children under age five to be belted was upgraded from a secondary action to a primary action. A police officer can stop a driver solely for a violation of the seat belt law. The law also expands the definition of passenger automobile to include vans, pickup trucks and utility vehicles.



The exemptions are any passenger automobile manufactured before July 1, 1966, a passenger automobile which is not required to be equipped with seat belt systems under federal law, and a physical or medical reason, verified in writing by a licensed physician, that the driver or passenger is unable to wear a seat belt system.

Seat belts can save your life and improve your chances of surviving a crash by 60 percent. Your chances of surviving a collision are three to four times better if you are wearing both a seat belt and a shoulder strap. Fastening your seat belt takes only three seconds and reduces the chances of death or serious injury. Seat belts help you in many ways, for example:

- They keep you from being thrown from the car in a collision. If you are held in place, any injury may also be less severe.
- They slow your body down with your car. If you hit something, your car stops, but you keep going at the same speed you were driving. Hitting

the dashboard or windshield at 30 mph is like falling from the top of a three-story building.

- They keep you from sliding on the seat during sudden stops and turns. Belts and straps keep you in position so you can control the car.

Tips for seat belt use

- Buckle up with both lap and shoulder belts on every trip. (Air bags are supplemental protection devices.)
- Wear the lap belt under the abdomen and low across the hips. The shoulder portion should come over the collar bone away from the neck and cross over the breast bone. The shoulder belt in most new cars can be adjusted on the side pillar to improve fit.
- Know how to adjust your seat belts, and how to release them if you have to quickly get out of the car.
- Buckle up if riding in the backseat; use center seat belts if those seats are used. The safety belts help riders from falling forward.
- Never put more than one person in one belt.

The average national seat belt use is 68 percent. The U.S. Department of Transportation's goals are to increase this number to 85 percent by 2000, to reduce fatalities by 4,000 and injuries by 100,000 persons, and to save $6.7 billion in annual accident-related costs. Because children model adult behavior, drivers should always buckle up.

Car seats

Traffic accidents are a leading killer of children. When riding in a car, children should be held in place by a restraint system that meets all Federal Motor Vehicle Safety Standards. Refer to the Child Restraint Law also explained in this chapter.

All child restraint systems built since January 1, 1981, must be designed to pass tough safety tests. These seats carry a label that gives the date of manufacture and tells you: "This child restraint system conforms to all applicable Federal Motor Vehicle Safety Standards."

There are many types and styles of car seats. An infant car seat will protect a baby up to 20 lbs. and 26 inches, and must be placed in the car facing the rear. A convertible car seat is a larger seat that can be used for an infant, or for a toddler of up to 40 lbs. and 40 inches in height. The seat can be adjusted to a reclining position and placed in the car facing backwards for a baby. When the baby weighs at least 17 lbs. and can sit up well without help, the seat can be adjusted to an upright position and placed in the car facing forward.

Note: It's preferred that whenever possible, the driver place child car safety seats in the vehicle's back seat. However, if you are riding with a new infant and the

vehicle does not have a back seat, move the front seat as far back as possible from the dashboard and make sure the child is buckled properly in the appropriate restraint for their height and weight. **Never place rear-facing infant safety seats in the front seat of a vehicle with a front passenger-side air bag.**

While a convertible seat is designed to be used facing forward once a child has reached at least 17 lbs., an infant seat must never be faced forward. To do so would be very dangerous. Be sure to check the label on your car seat to find out the size and weight of the child the seat is designed to protect.

Using the car seat every time your child rides in the car, and using it correctly each time is very important for the safety of your child. Be sure to read the instructions that come with the seat and follow them very carefully. Correct use of the car seat is the best protection you can offer your child. For more information on child car seats, contact the Division of Highway Traffic Safety at (800) 422-3750.

Child Restraint Law

The New Jersey child passenger safety law states that:

- Children under 18 months of age must be properly buckled into a federally approved child car seat if they ride anywhere in the vehicle.
- All children under five and over 18 months must also be in a child car seat if they ride in the front seat, or belted if riding in a rear seat.
- Where the number of children under five in a family group exceeds the number of safety belts available, the unbelted children must ride in the rear seat.

Failure to comply with this law could mean a $43 fine and court costs.

Using a child restraint system designed for your vehicle is the law in New Jersey. Do not hold a child in your lap. You are not strong enough at the instant of a crash to hold or protect your child against injury. Your weight is thrown forward during a crash and can crush a child in your arms even if you are wearing a seat belt.

Air bags

Air bags are standard equipment in almost all new cars and are designed to supplement safety belts in frontal crashes. Federal safety standards require that manufacturers equip all new passenger cars and light trucks with air bags by 1999. According to the National Highway Traffic Safety Administration, between 1986 and 2000 frontal airbags saved the lives of 5,303 front seat riders — 72 percent of them unbelted.

Air bags inflate at speeds of up to 200 mph to protect adults in a front-end collision. An average size adult who is correctly belted is not likely to come in contact with the air bag until it is fully inflated.

When air bags are combined with lap/shoulder safety belts, they've saved many adult lives and prevented many injuries in motor vehicle crashes. However, air bags could seriously injure or kill children who are sitting in the front seat.

In 1995 the National Highway Traffic Safety Administration (NHTSA) allowed cutoff switches in pickup trucks, sports cars and autos with no back seat. In January 1998 it allowed repair shops and dealers to install the switches in vehicles after the appropriate application was made for people in these categories:

- **driver and passenger side air bags:** for individuals with medical conditions when the risks of a deploying air bag exceed the risks of impacting the steering wheel, dashboard or windshield.
- **driver side air bags only:** for individuals who cannot properly operate the vehicle and keep at least 10 inches between the center of the steering wheel and the center of the breastbone.
- **passenger side air bags only:** for individuals who must place infants in the front seat because the vehicle has no rear seat (e.g., a pickup truck) or the rear seat is too small to hold the child's rear-facing seat, or the driver must monitor the child's medical condition; for individuals who must place children one year to 12 years in the front seat because the vehicle has no rear seat, or because the individual must transport more children than can be seated in the rear seat or because the driver must monitor the child's medical condition.

For more information about an air bag on-off switch or for an application to request one, call NHTSA's toll-free Auto Safety Hotline at (800) 424-9393.

Children of any age are the safest when they're belted properly in the back seat of a car, especially when that car is equipped with a passenger-side air bag. Other safety points are:

- Always put an infant in a rear-facing infant child safety seat in the back seat of a car with air bags.
- Always be sure that children 12 years and younger ride in the back seat of the vehicle.
- Always make sure everyone is buckled up.

You can tell if your vehicle has an air bag by the words “air bag” or the letters “SRS” (supplemental restraint system) or “SIR” (supplemental inflatable restraint) on the steering wheel and dashboard panel. Manufacturers also may mark the sunvisors or the sides of the open door frame with warning labels or enter a warning in the vehicle owner’s manual.

Car condition

The second step before you drive is to check the condition of your vehicle. If the items below aren’t working properly, it means your car needs to be repaired.

BACKUP LIGHTS. When driving in reverse, your backup lights should be on. Check them to make sure they are in working order.

Note: It is against New Jersey law to have any backup lights on while a car is moving forward.

BRAKES. You should be able to brake smoothly and quickly. If you feel your car pull to one side when you stop, feel a taut pedal or hear an unusual squealing or grinding, have your brakes checked. With **conventional disc and drum brakes**, pump them gently after driving through water to test them and dry them out. Do not hit the brakes hard or they could lock up. You should be able to stop within 25 feet at 20 miles per hour. Try this out in an empty parking lot. Make chalk marks on the surface and see if you can stop within that distance.

If your vehicle has an **anti-lock braking system** (ABS), test the brakes by keeping your foot on the brake pedal with a steady pressure. Never pump an ABS or jerk the steering wheel when you brake. On very soft surfaces, such as loose gravel or unpacked snow, an ABS system may actually lengthen stopping distances. In wet or slippery conditions, you should still drive carefully, always keep a safe distance from the vehicle in front of you, and maintain a speed consistent with the road conditions.

BRAKE LIGHTS. If your brake lights are not working, someone may crash into you from the back. Have someone help you check them. Replace broken light covers. They may cause a glare that affects the driver in back.

HEADLIGHTS. Make sure your bright and dim lights are working and in line. Check them against the garage wall or on parked cars. Keep your lights clean. If other drivers flash their lights while yours are on low beam, this could mean your lights are out of line.

HORN. Do not overuse your horn but check it often to know it is working. Use your horn to signal when passing and when coming out of a blind alley, curve or driveway.

STEERING. On straight level roads a car should hold a straight course. The front end should not vibrate (shimmy). Your steering should respond to your turns without too much play in the steering wheel.

TAILLIGHTS. Always keep tail and side lights in working order. They signal other drivers in the dark and prevent accidents.

TIRES. If you feel or hear any unusual thumping while driving, check your tires. Bumps, cuts, or bad tread can cause blow-outs. Your tire pressure should be checked often, when tires are cold. Look in your owner's manual for the right tire pressures or ask for advice at a service station. Do not drive on tires that have less than 1/16 inch of tread, about the edge of a dime. To hold onto the road properly, tires must match (don't mix radials with other tire types) and must have enough tread.

TURN SIGNALS. You should be able to hear the clicking and see the lighted arrows flash on your dashboard. If they don't work, get the signals fixed as soon as possible. Meanwhile, use hand signals.

WINDSHIELD. Cracks or chips in your windshield could cause it to break; have it replaced. Keep your windshield clean, inside and out. Make sure your windshield wipers are always working. If they come with washers, keep antifreeze in the spray to stop icing. New Jersey laws prohibit add-on tinting on windshields and front side windows.

Starting a parked car

Before getting into a car, look behind it and in front of it. These are blind spots once you are behind the wheel. There may be children there. There also may be bottles, cans, bicycles or other things which you cannot see from the driver's seat.

Starting checklist

- Make sure all windows are clean and there is nothing blocking your vision.
- Adjust the seat so you can reach all pedals and controls easily.
- Adjust the inside and outside rearview mirrors.
- Fasten safety belts and shoulder harnesses so that they are firm and comfortable.
- Make sure the car is in park or neutral gear and the parking brake is set.

You should keep a good posture while driving. Adjust the seat so that you can reach foot pedals easily. Get comfortable behind the wheel. You should not have to strain to reach gear shift levers, turn signals or dashboard controls. Your position when properly seated should allow you to see clearly and allow you to glance to the rear.

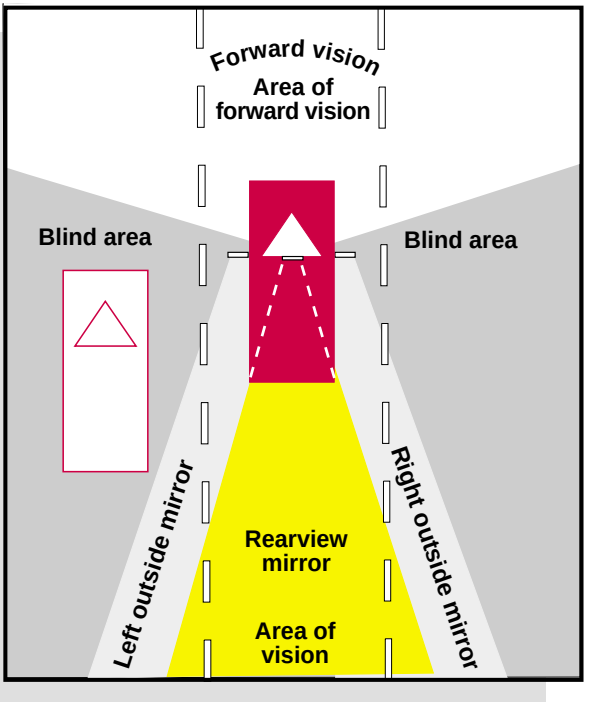
Adjust your glasses, if you wear them. More than 95 percent of the information you need to drive is visual. To fight glare at night, avoid color lenses because they'll distort color, but instead try antireflective coatings on your lenses. They will help eliminate internal reflections in eyeglasses and may help night driving. Have an eye checkup every two years. As you age, visual clarity declines and peripheral vision is less distinct. For example, a 60 year-old person perceives light about 1/3 as well as a 20-year old.

Adjust both inside and outside mirrors to reduce blind spots. These are areas where you can not see behind your car (on both sides) through the mirror. Check

this by turning your head.

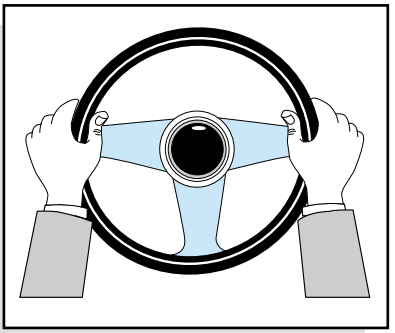
Adjust the outside mirror so you can just see the tip of your front door handle in the lower right of the mirror. This allows you to see part of the lanes of traffic to the left and rear of your car.

After starting the engine, make sure your path is clear. Turn and look back. Do not depend on rearview mirrors. Be sure to check for pedestrians and less conspicuous vehicles such as bicycles and MOPEDS. Give the proper signal and drive with caution.



To check your mirrors, let a vehicle pass you on the left. As it disappears from the inside rearview mirror, you should be able to see its front bumper in the outside rearview mirror. The illustration above shows blind spots in your rearview mirror while driving.

Steering



For normal driving, keep both hands on the upper half of the wheel. Hold the wheel as steady as you can as the car's speed increases. Keep the car in the center of the lane you are in. Keep to the right on a two lane road with traffic coming toward you. After you feel how the car reacts to your steering, you will be ready to practice turning, parking and other movements.

Your grip on the steering wheel is important. Think of the wheel as the face of a clock. In normal driving, keep your left hand at 9 o'clock and your right hand at 3 o'clock. Your grip should be firm but not too tight. Keep both hands on the wheel at all times except when shifting gears or giving hand signals. It takes practice to get the feel of steering. Never violently jerk the steering wheel while braking if you have anti-lock brakes (see next page under "Proper braking").

Speed control

It is important in driving to use certain speed control guidelines. Start slowly. Gradually increase speed. Keep a steady speed on open roads. Slow down smoothly.

Press the gas pedal lightly. Starting up slowly gives other drivers and people walking a chance to see what you are doing. They can then judge how to react.

How do you know when you have reached the speed you want? Glance quickly at the speedometer. Try to keep a steady, even pressure on the gas pedal. With practice, you will be able to judge the correct pressure for any speed. When you keep your speed steady, you help other drivers adjust their speed to yours.

Stopping distances on dry surfaces for passenger cars (in feet)*

Speed mph	Reaction distance	Braking distance	Total
10	11	6	17
20	22	25	47
30	33	55	88
40	44	105	149
50	55	188	243
60	66	300	366
70	77	455	532

*Based on a reaction time of 3/4 seconds, which is typical for most drivers under most traffic conditions. See p. 45 for more information on stopping, p. 58 for information about following distances, and p. 62 for information about stopping at night.

Stopping distances

There is no simple way to tell you exactly how long it will take you to stop at a certain speed. Your stopping distance depends on:

- your own reaction time;
- weather and road conditions;
- the weight of the vehicle;
- the condition of the brakes;
- the condition and type of tires;

- the condition of the roadway.

One point is sure. The faster you are going, the longer it will take you to stop. When you must stop quickly, your speed can be the difference between life and death.

Proper braking

While use of the brakes may seem simple, it is not. You should first find out the type of braking system that's on your vehicle: conventional drum and disc brakes or an anti-lock braking system (ABS). The vehicle type—front or rear-wheel drive—does not determine proper braking. It's the type of braking system that's important. For more information, see p. 29.

Slamming the brake pedal down too hard is a common mistake new drivers make. The car jerks to a stop quickly and wears out brakes and tires. Apply the brakes gently with steady pressure. With an ABS, don't pump the brakes or violently jerk the wheel when you brake. An ABS-equipped car may go out of control at only 35 mph if you violently jerk the steering wheel and brake - even on dry pavement. Practice hard braking and steering in an empty parking lot or similar open space until you're accustomed to the ABS. As you improve with practice, you should be able to stop as quickly or as slowly as you choose when driving at a proper speed. Use your right foot for both the brake and the gas pedal. This ensures that you do not brake and speed up at the same time.

Driving signals

Give a proper signal for any change in direction or for stopping. Most cars have automatic turn signals and brake lights. Be sure to cancel these signals after making a turn. They could mislead other drivers and other roadway users.

New Jersey law requires that a driver know the correct hand signals for stopping and turning:

- stop or slowing down — hand and arm downward, palm facing to the rear;
- right turn — hand and arm upward;
- left turn — hand and arm straight out.

These signals are standard for all states. Put your arm well out of the car window when giving signals. Turn signals must be given at least 100 feet before you turn.

When driving, never put your hand out the window except to give a signal. Flipping cigarettes out the window or pointing could be taken for a signal. These practices are unsafe. You can never be sure about another driver's signals. Look for other signs, such as slowing down or starting to turn.

A horn is a warning signal. It calls attention to what you are doing. Sound your horn when passing another vehicle if not in a business or residential zone.

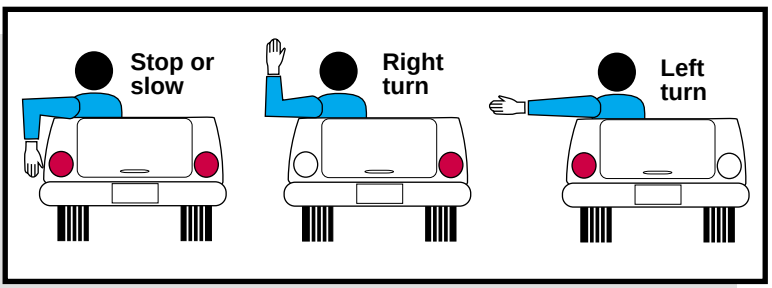
You should be able to hear a horn for at least 200 feet under normal conditions. Sirens, whistles, or bells may only be used by emergency vehicles.

Turning

Turning guidelines

- Decide well in advance where you want to turn. Never make a last minute choice. If you miss your turn, do not back up. It is better to take the next turn than to risk a collision.
- Look behind you and to both sides for other vehicles (or people) to see if it is safe to turn. Check for less visible vehicles, such as bicycles, MOPEDs and motorcycles.
- Signal first and then move into the proper lane. (Use turn lights or hand signals). The faster the traffic is moving, the sooner you should plan your turn. The law requires that you get into the proper lane and signal at least 100 feet before you make any turn.

Slow down before reaching an intersection. Make sure there are no pedestrians or other highway users in the way before you begin your turn. Keep a steady speed and follow pavement markings. Always stay in the same lane until you have finished the turn and make sure your signal is turned off after the turn is completed.



Turning around

Start from the far right side of the road. Look for other traffic. If clear, move forward slowly while turning the steering wheel to the left. Stop several inches from the left curb or street edge.

Back slowly while turning the steering wheel to the right. Stop several inches from the right curb or street edge.

Drive forward slowly while turning the steering wheel to the left. Straighten your wheels as you face the direction you want to go. This should complete your 3-point turn.

At times you may have to turn your car around in close quarters. You will be asked to do this during your driving test. This is called a 3-point turn, or K-turn.

Driving in reverse

Before backing, be sure the path is clear. Your view to the rear is limited. A child may be playing there. A shopping cart may be there.

To steer the car in reverse, turn the wheel in the direction you want the rear of the car to go. Turning the wheel to the right steers the back of the car to the right. Turning the wheel to the left steers to the left.

Use the 12 o'clock position to back your car in a straight line. Turn your head and body to the right until you can see clearly through the back window. Brace yourself by placing your right hand and arm over the back of the seat, grasp the top of the steering wheel with your left hand and select the point where you want to steer.

When driving in reverse, remember that the front of your car will swing in the opposite direction of your turn. Do not depend on mirrors alone when backing. Back slowly.

When taking the road test for a driver license, you must show that you can drive in reverse properly. You will be asked to back your car about 100 feet. You should be able to back up in a straight line, slowly and smoothly.

Parking

Parking on a hill

When parking on a hill you must make sure your car does not roll into traffic if the brakes do not hold. Always set the hand brake. Shift to the **Park** position if you have one. If not, shift to reverse or low gear. If you park where there is a curb:

Facing downhill, turn your wheels toward the curb and shift into reverse gear or **Park**.

Facing uphill, turn your wheels away from the curb and shift into low gear or **Park.**

If there are no curbs, turn your wheel toward the edge of the road, whether facing uphill or downhill.

Angle parking

Angle parking is often used in parking lots, shopping centers, and sometimes at curbs. When you enter an angle parking space on your right:

- Watch for traffic both ahead and behind.
- Signal and begin slowing down.
- Make sure the rear of your car will clear the parked cars.
- Steer sharply into the parking space, then straighten the wheels, centering your car in the parking space.
- Shift to **Park** or reverse if standard transmission and apply the parking brake.

Before backing out of an angle parking space:

- Walk around to make sure nothing is in your way.
- Move your car back slowly because it is hard to see oncoming traffic. Be sure traffic is clear in the lane where you are backing.
- Tap the horn to warn pedestrians nearby.
- When you can see past the tops of cars parked next to you, stop and look again. Look back and to each side for other drivers.
- Remember that the front of your car will swing opposite to the direction of your turn.
- Back slowly while turning until your left front wheel passes the rear bumper of the car parked on the left.
- Straighten the wheels as your car comes back into the lane of traffic.

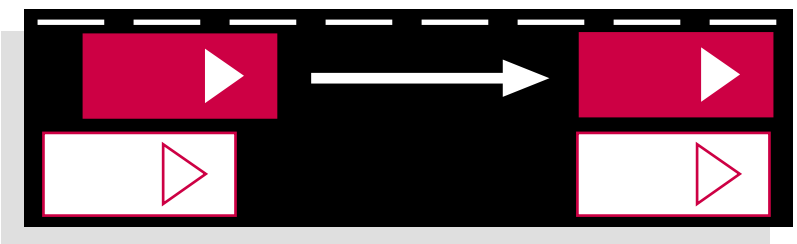
Parallel parking

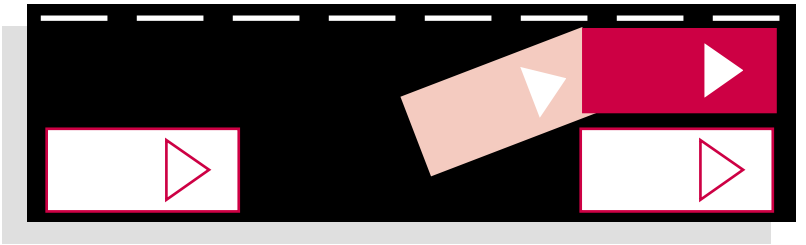
This is the most common type of parking on city streets. For the new driver it also takes the most practice.

Note: The slower and smoother you back into the parking space, the easier it is to park. The way to parallel park is shown in the sketches on the following pages.

Find a space large enough for your car. Signal for a stop. Pull up alongside (parallel) about two to four feet from the car in front. Turn and check to see that the way is clear behind you before you back up.

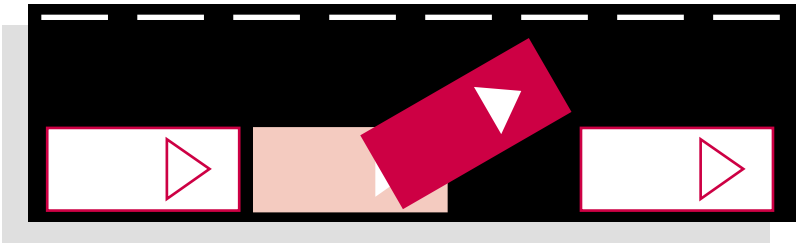
Begin backing up slowly for about two feet. Then turn your wheel all the way to the right. Remember, when you are backing and turning, the front end of the car will swing into traffic.





When the front of your car has cleared the rear bumper of the car in front, stop. Check your angle.

Make sure your right back wheel has not hit the curb. Then turn your wheel all the way to the left while beginning to back slowly. Remember, the front end of your car will swing toward the car in front. Make sure you can clear its back bumper.



When your car is in line, stop. Be sure you do not hit the car in back. Then turn your wheels straight and drive to the center of the parking space. Your tires should be no more than six inches from the curb.

To parallel park, you need practice. If you are a new driver, try it often in an empty parking lot first. Use flags or markers 25 feet apart to show where the other cars would be. If you hit these signs, you are not ready for parking between real cars. Keep practicing.